Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A filter calibration circuit, consisting of~~comprising~~:

a DC voltage source operable to produce a reference amplitude signal;

an amplitude detector configured to receive an output signal from a variable gain stage and produce an amplitude signal, wherein the output signal from the variable gain stage is produced by modifying an amplitude of an output signal produced by a filter circuit, which comprises capacitive components to be calibrated to a desired frequency;

a comparator operable to generate a comparator output based on the ~~a filter output~~ amplitude signal of the amplitude detector and [[a]]the reference amplitude signal of the DC voltage source~~, the filter output amplitude signal corresponding to an amplitude of an output signal produced by a filter circuit, which comprises capacitive components, that is to be calibrated to a desired frequency~~; and

a calibration logic unit, separate from the comparator, operable to

receive the comparator output,

produce a digital gain code based on the comparator output to adjust a gain of the variable gain stage, and

produce a digital component code corresponding to switches associated with the capacitive components in the filter circuit to be used by the filter circuit in adjusting a combined value of the capacitive components in the filter circuit by selectively turning on or off one or more of the switches associated with the capacitive components to control a number of the capacitive components active in the filter circuit to calibrate the filter circuit to the desired frequency.

2. (Cancelled).

3. (Previously Presented) The filter calibration circuit of claim 1, wherein:
the filter circuit includes an LC tank circuit.

4. (Previously Presented) The filter calibration circuit of claim 1, wherein:
the calibration logic unit includes a digital signal processor.

5. (Previously Presented) The filter calibration circuit of claim 4, wherein:
the digital signal processor includes the comparator.

6. (Previously Presented) The filter calibration circuit of claim 1, wherein:
the calibration logic unit includes a logic circuit.

7. (Previously Presented) The filter calibration circuit of claim 6, wherein:
the logic circuit includes the comparator.

8. (Cancelled).

9. (Previously Presented) The filter calibration circuit of claim 1, wherein:
the capacitive components are monolithically fabricated on a semiconductor substrate.

10.-15. (Cancelled)

16. (Previously Presented) The filter calibration circuit of claim 1, wherein:
the filter calibration circuit is operable to calibrate the filter circuit to the desired frequency automatically when the filter calibration circuit is connected to a power source.

17. (Previously Presented) The filter calibration circuit of claim 1, wherein:
the filter calibration circuit is operable to calibrate the filter circuit to the desired frequency without requiring a reduction in a quality factor of the filter circuit.

18. (Previously Presented) The filter calibration circuit of claim 1, wherein:

the filter calibration circuit is operable to calibrate the filter circuit to the desired frequency without requiring manual calibration of the filter circuit.

19. (Previously Presented) The filter calibration circuit of claim 1, wherein:

the filter calibration circuit is compliant with any of IEEE standards 802.11, 802.11a, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802.11n, and 802.16.

20. (Currently Amended) A filter calibration circuit, consisting of~~comprising~~:

means for sourcing a reference amplitude signal;

an amplitude detector means for receiving an output signal from a variable gain stage and producing an amplitude signal, wherein the output signal from the variable gain stage is produced by modifying an amplitude of an output signal produced by a filter circuit, which comprises capacitive components to be calibrated to a desired frequency;

comparing means for generating a comparator output based on the ~~a filter output~~ amplitude signal of the amplitude detector means and [[a]]the reference amplitude signal of the means for sourcing a reference amplitude signal~~, the filter output amplitude signal corresponding to an amplitude of an output signal produced by a filtering means, which comprises capacitive means, that is to be calibrated to a desired frequency~~; and

code generating means, separate from the comparing means, for

receiving the comparator output,

producing a digital gain code based on the comparator output to adjust a gain of the variable gain stage, and

producing a digital component code corresponding to switching means associated with the capacitive means to be used by the filtering means in adjusting a combined value of the capacitive component means in the filtering means by selectively turning on or off one or more of the switching means associated with the capacitive means to control a number of the capacitive means active in the filtering means to calibrate the filtering means to the desired frequency.

21. (Cancelled).

22. (Previously Presented) The filter calibration circuit of claim 20, wherein: the filtering means includes an LC tank circuit means.

23. (Previously Presented) The filter calibration circuit of claim 20, wherein: the code generating means includes a digital signal processing means.

24. (Previously Presented) The filter calibration circuit of claim 23, wherein: the digital signal processing means includes the comparing means.

25. (Previously Presented) The filter calibration circuit of claim 20, wherein: the code generating means includes a logic circuit means.

26. (Previously Presented) The filter calibration circuit of claim 25, wherein: the logic circuit means includes the comparing means.

27. (Cancelled).

28. (Previously Presented) The filter calibration circuit of claim 20, wherein: the capacitive means are monolithically fabricated on a semiconductor substrate.

29.-34. (Cancelled)

35. (Previously Presented) The filter calibration circuit of claim 20, wherein:

the filter calibration circuit is operable to calibrate the filtering means to the desired frequency automatically when the filter calibration circuit is connected to a power source means.

36. (Previously Presented) The filter calibration circuit of claim 20, wherein:

the filter calibration circuit is operable to calibrate the filtering means to the desired frequency without requiring a reduction in a quality factor of the filtering means.

37. (Previously Presented) The filter calibration circuit of claim 20, wherein:

the filter calibration circuit is operable to calibrate the filtering means to the desired frequency without requiring manual calibration of the filtering means.

38. (Previously Presented) The filter calibration circuit of claim 20, wherein:

the filter calibration circuit is compliant with any of IEEE standards 802.11, 802.11a, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802.11n, and 802.16.

39. (Currently Amended) A method for calibrating a filter circuit, which comprises capacitive components, the filter circuit receiving an input signal and producing a filtered output signal, the method comprising:

initializing a digital component code corresponding to switches associated with capacitive components in the filter circuit to a value such that an initial peak frequency of the filter circuit is below or above a desired frequency;

initializing a digital gain code to a value such that a modified filtered output signal produced by a variable gain stage is greater than a DC reference voltage, wherein the variable gain stage is modifying the filtered output signal based on the initialized digital gain code;

producing an amplitude signal corresponding to the modified filtered output signal produced by the variable gain stage modifying the filtered output signal based on the digital gain code;

generating a comparator output based on the ~~a filter output~~ amplitude signal and [[a]]the DC reference voltage~~amplitude signal, the filter output amplitude signal corresponding to an amplitude of the filtered output signal at a desired frequency~~; and

adjusting the digital gain code and the ~~generating a~~ digital component code in combination until ~~corresponding to switches associated with the capacitive components in the filter circuit based on~~ the comparator output indicates that the filter circuit is calibrated at the desired frequency; [[and]]

wherein adjusting the digital component code adjusts ~~adjusting~~ a combined value of the capacitive components in the filter circuit by selectively turning on or off one or more of the switches associated with the capacitive components to control a number of the capacitive components active in the filter circuit ~~based on the digital component code~~ to calibrate the filter circuit at the desired frequency.

40.-41. (Cancelled).

42. (Currently Amended) The method of claim [[41]]39, wherein:
generating the comparator output includes digitally generating the comparator output.

43. (Cancelled).

44. (Previously Presented) The method of claim 39, wherein:
adjusting the combined value of the capacitive components comprises turning on or off one or more of the switches associated with the capacitive components monolithically fabricated on a semiconductor substrate.

45.-50. (Cancelled)

51. (Original) The method of claim 39, further comprising:
calibrating the filter circuit automatically when the filter circuit is connected to a power source.

52. (Original) The method of claim 39, further comprising:

calibrating the filter circuit without requiring a reduction in a quality factor of the filter circuit.

53. (Original) The method of claim 39, further comprising:

calibrating the filter circuit without requiring manual calibration of the filter circuit.

54. (Original) The method of claim 39, wherein:

the method is compliant with any of IEEE standards 802.11, 802.11a, 802.11b, 802:11e, 802.11g, 802.11h, 802.11i, 802.11n, and 802.16.

55. (Currently Amended) A wireless transceiver, comprising:

a transmitter operable to transmit a modulated carrier signal, the transmitter including

a filter circuit, which comprises capacitive components, operable to filter the modulated carrier signal and produce a filter output signal;

a variable gain stage to adjust an amplitude of the filter output signal; and

a calibration circuit operable to calibrate the filter circuit to a desired frequency and adjust a gain of the variable gain stage to adjust the amplitude of the filter output signal, the calibration circuit consisting of: ~~including,~~

a DC voltage source operable to produce a reference amplitude signal;

an amplitude detector to receive an output signal from the variable gain stage and produce an amplitude signal;

a comparator operable to generate a comparator output based on the ~~a filter output~~ amplitude signal of the amplitude detector and [[a]]the reference amplitude signal of the DC voltage source~~, the filter output amplitude signal corresponding to an amplitude of an output signal produced by the filter circuit;~~, and

a calibration logic unit, separate from the comparator, operable to

receive the comparator output,

produce a digital gain code based on the comparator output to adjust a gain of the variable gain stage, and

________________________produce a digital component code corresponding to switches associated with the capacitive components in the filter circuit to be used by the filter circuit in adjusting a combined value of the capacitive components in the filter circuit by selectively turning on or off one or more of the switches associated with the capacitive components to control a number of the capacitive components active in the filter circuit to calibrate the filter circuit to the desired frequency.

56. (Cancelled).

57. (Original) The wireless transceiver of claim 55, wherein:
the filter circuit includes an LC tank circuit.

58. (Original) The wireless transceiver of claim 55, wherein:
the calibration logic unit includes a digital signal processor.

59. (Original) The wireless transceiver of claim 58, wherein:
the digital signal processor includes the comparator.

60. (Original) The wireless transceiver of claim 55, wherein:
the calibration logic unit includes a logic circuit.

61. (Original) The wireless transceiver of claim 60, wherein:
the logic circuit includes the comparator.

62. (Cancelled).

63. (Previously Presented) The wireless transceiver of claim 55, wherein:
the capacitive components are monolithically fabricated on a semiconductor substrate.

64.-69. (Cancelled)

70. (Original) The wireless transceiver of claim 55, wherein:

the calibration circuit is operable to calibrate the filter circuit to the desired frequency automatically when the calibration circuit is connected to a power source.

71. (Original) The wireless transceiver of claim 55, wherein:

the calibration circuit is operable to calibrate the filter circuit to the desired frequency without requiring a reduction in a quality factor of the filter circuit.

72. (Original) The wireless transceiver of claim 55, wherein:

the calibration circuit is operable to calibrate the filter circuit to the desired frequency without requiring manual calibration of the filter circuit.

73. (Original) The wireless transceiver of claim 55, wherein:

the wireless transceiver is compliant with any of IEEE standards 802.11, 802.11a, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802:11n, and 802.16.

74. (Currently Amended) A wireless transceiver, comprising:

transmitting means for transmitting a modulated carrier signal, the transmitting means including

a filtering means, which comprises capacitive means for filtering the modulated carrier signal and producing a filter output signal;

a variable gain stage means for adjusting an amplitude of the filter output signal; and

calibrating means for calibrating the filtering means to a desired frequency and adjusting a gain of the variable gain stage to adjust the amplitude of the filter output signal, the calibrating means consisting of: ~~including,~~

means for sourcing a reference amplitude signal,

an amplitude detector means for receiving an output signal from the variable gain stage and produce an amplitude signal,

comparing means for generating a comparator output based on the ~~a filter output~~ amplitude signal of the amplitude detector means and [[a]]the reference amplitude signal of the means for sourcing a reference amplitude signal, ~~the filter output amplitude signal corresponding to an amplitude of an output signal produced by the filtering means;~~ and

code generating means, separate from the comparing means, for

receiving the comparator output,

producing a digital gain code based on the comparator output to adjust a gain of the variable gain stage means, and

producing a digital component code corresponding to switching means associated with the capacitive means in the filtering means to be used by the filtering means in adjusting a combined value of the capacitive means in the filtering means, by selectively turning on or off one or more of the switching means associated with the capacitive means to control a number of the capacitive means active in the filtering means to calibrate the filtering means to the desired frequency.

75. (Cancelled).

76. (Original) The wireless transceiver of claim 74, wherein:
the filtering means includes an LC tank circuit means.

77. (Original) The wireless transceiver of claim 74, wherein:
the code generating means includes a digital signal processing means.

78. (Original) The wireless transceiver of claim 77, wherein:
the digital signal processing means includes the comparing means.

79. (Original) The wireless transceiver of claim 74, wherein:
the code generating means includes a logic circuit means.

80. (Original) The wireless transceiver of claim 79, wherein:
the logic circuit means includes the comparing means.

81. (Cancelled).

82. (Previously Presented) The wireless transceiver of claim 74, wherein:
the capacitive means are monolithically fabricated on a semiconductor substrate.

83.-88. (Cancelled)

89. (Original) The wireless transceiver of claim 74, wherein:
the calibrating means is operable to calibrate the filtering means to the desired frequency automatically when the calibrating means is connected to a power source means.

90. (Original) The wireless transceiver. of claim 74, wherein:
the calibrating means is operable to calibrate the filtering means to the desired frequency without requiring a reduction in a quality factor of the filtering means.

91. (Original) The wireless transceiver of claim 74, wherein:
the calibrating means is operable to calibrate the filtering means to the desired frequency without requiring manual calibration of the filtering means.

92. (Original) The wireless transceiver of claim 74, wherein:
the wireless transceiver is compliant with any of IEEE standards 802.11, 802.11x, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802.11n, and 802.16.

93.-97. (Cancelled).

98. (New) The method of claim 39, wherein adjusting the digital gain code and the digital component code in combination until the comparator output indicates that the filter circuit is calibrated at the desired frequency comprises:

decrementing a value of the digital gain code from the initialized value until the comparator output indicates that the amplitude signal is less than the DC reference voltage;

incrementing a value of the digital component code;

returning to the decrementing of the value of the digital gain code when the comparator output indicates that the amplitude signal is greater than the reference voltage; and

decrementing the value of the digital component code when the comparator output indicates that the amplitude is less than the reference voltage after the incrementing the value of the digital component code.